IN THE CLAIMS

1. (Currently Amended) A method of plasma etching, comprising:

introducing into an etch chamber a substrate having a layer of dielectric material is at least one of a hafnium containing material, HfO2, ZrO2, ZrSiO2, HfSiO2, and TaO2;

providing into the etch chamber a process gas comprising carbon monoxide and a halogen containing gas; and

exposing the layer of dielectric material to a plasma formed from the process gas.

2. (Original) The method of claim 1 wherein the halogen containing gas comprises a chlorine containing gas.

3. (Original) The method of claim 1 wherein halogen gas comprises chlorine.

4. (Original) The method of claim 3 wherein said chlorine containing gas is Cl2.

5. (Original) The method of claim 4 wherein said providing step further comprises the step of:

supplying 20 to 300 sccm of Cl2 and 2 to 200 sccm of CO.

6. (Original) The method of claim 1 further comprising:

maintaining a gas pressure of between 2-100 mTorr.

7. (Original) The method of claim 5 further comprising the step of:

maintaining a gas pressure of 4 mTorr.

8. (Original) The method of claim 1 further comprising:

applying a bias power to a cathode electrode of 5 to 100 W.

9. (Original) The method of claim 6 further comprising:
applying a bias power to a cathode electrode of 20 W.

10. (Original) The method of claim 1 further comprising:
applying an inductive source power to an inductively coupled antenna of 200 to 2500 W.

11. (Original) The method of claim 5 further comprising:
applying an inductive source power to an inductively coupled antenna of 1100 W.

12. (Currently Amended) A method of plasma processing, comprising:
introducing into an process chamber a substrate having a layer of ~~hafnium oxide (HfO_2)~~ $\underline{TaO_2}$;
introducing into the process chamber a process gas comprising carbon monoxide and a halogen containing gas; and
exposing the layer of $\underline{TaO_2}$ ~~hafnium oxide (HfO2)~~ to a plasma formed from the process gas.

13. (Original) The method of claim 12 further comprising the step of:
maintaining the substrate at a temperature between 100 to 500 degrees Celsius.

14. (Original) The method of claim 12 further comprising the step of:
maintaining the substrate at a temperature of 350 degrees Celsius.

15. (Original) The method of claim 12 wherein the halogen containing gas comprises chlorine.

16. (Original) The method of claim 12 wherein the halogen containing gas is hydrogen chlorine.

17. (Currently Amended) A method of plasma processing, comprising:

introducing into the process chamber a process gas comprising carbon monoxide and a halogen containing gas; and

exposing a substrate, disposed in the process chamber and having at least partially exposed material containing ~~hafnium~~ at least one of ZrO2 and ZrSiO2, to a plasma formed from the process gas.

18. (Original) The method of claim 17 wherein the halogen containing gas comprises chlorine.

19-20. (Cancelled)

21. (New) A method of plasma etching, comprising:

introducing into an etch chamber a substrate having a $HfSiO_2$ layer;

providing into the etch chamber a process gas comprising carbon monoxide and a halogen containing gas; and

exposing the $HfSiO_2$ layer to a plasma formed from the process gas.

22. (New) The method of claim 21 wherein halogen gas comprises chlorine.